

EDITORIAL NOTES.

PROF. L. F. WARD has completed the preparation of index slips for a catalogue of fossil plants.

PROF. JOHN H. BALFOUR, Professor of Botany in the University of Edinburgh, died in February, aged 76.

MR. I. C. MARTINDALE has published an obituary notice of Chas. F. Parker, in the *Proc. Philad. Acad.* for 1883.

THERE WILL be printed in the next issue of the GAZETTE a complete list of Dr. Engelmann's contributions to botany.

PROF. J. MACOUN, botanist to the Geological Survey of Canada, is preparing a report on Canadian fungi, to be fully illustrated with plates.

DR. PARRY has gone to St. Louis to consult with Dr. Engelmann's son in regard to the disposal of his father's valuable collection and notes.

THE FOURTH VOLUME of Proceedings of the Davenport Academy of Sciences, now printing, will contain an unusual number of botanical papers.

ACCORDING TO RECENT studies of M. Cornu, the oospores of *Peronospora*, when buried at a considerable depth, may retain their vitality from two to five years.

PROF. J. C. ARTHUR has accepted the position of botanist to the New York Agricultural Experiment Station, and has already entered upon his duties at Geneva.

IN THE LAST REPORT of the Ottawa Field-Naturalists' Club, we note that the botanical branch report twenty-four additions to the *Flora Ottawaensis* during the last season.

S. E. CASSINO announces that he will soon issue a translation of Dr. Behren's book "On the use of the Microscope in Botany," translated by Rev. A. B. Hervey, and assisted by Prof. R. H. Ward.

"A BRIEFER COURSE IN BOTANY," by Professor C. E. Bessey, will soon be issued from the press of Henry Holt & Co. It is to be a concise introduction to the science, adapted to the use of common and high schools.

THERE IS A CURIOUS but rather appalling mistake in proof reading in the last GAZETTE. On page 44 it says that the French expended 30,000,000 "lives," when it should have said "livres," which makes some difference.

DR. A. S. BALDWIN FINDS that the number of growth rings in trees of Northern Florida can be explained by reference to the weather record, a ring being formed whenever the growth is checked, whether by cold or drought.

THE BILL BEFORE Congress for the establishment of "National Experiment Stations" ought to pass. The provisions of the bill are probably as good as could be expected, and if the work is in the hands of a competent director, the results can not fail to be very profitable to agriculture, and botanical science in general.

ACCORDING TO A recent note in *Science*, the Harvard College Herbarium has received during the past year 8,755 sheets of plants, over 5,000 of which came from the rich herbarium of the late George Curling Joad, of Wimbledon, near London.

SCIENCE OF FEBRUARY 15th says some earnest words regarding the value of the botanical researches which may be undertaken by agricultural experiment stations, and the high position which their great practical importance should secure.

DR. E. L. STURTEVANT has published for private distribution a pamphlet entitled, "Maize: an attempt at Classification." It is profusely illustrated with cross-sections of seeds, which show plainly the characters upon which the classification is based.

LIEUT. SCHWATKA collected some plants about the headquarters of the Yukon, which have been determined by Sereno Watson. *Erysimum parviflorum*, *Amelanchier alnifolia*, *Pentstemon confertus*, and *P. glaucus* (?) are mentioned as new to so northern a latitude.

PROF. BESSEY, in the March *Naturalist*, suggests a neat demonstration of the flow of sap. If a small branch is cut from a maple tree during a cold day, and warmed quickly, the water will flow freely. On cooling it the flow ceases, and warming again causes the flow to be resumed.

DR. J. B. DE LACERDA has been investigating the disease known in Brazil as "beriberi." The work has been done in the physiological laboratory of the National Museum of Rio de Janeiro, the method of Pasteur being employed. The conclusions are that it is a parasitic disease, and that it seems to be conveyed to its victims by rice, apparently the same microphyte being obtained in the blood culture from beriberi patients and the culture of contaminated rice grains.

AT A RECENT meeting of the Ottawa (Canada) Field Naturalists' Club, Prof. J. Macoun read a paper on "Edible and Poisonous Fungi," stating that owing to the difficulty of distinguishing between good and bad kinds at sight, it is always advisable to partake lightly at first of such as are not certainly known to be non-poisonous. Those with an agreeable taste and odor will usually prove, however, to be harmless. He advised the more extensive use of these plants, and described a number of the more abundant alimentary species, such as *Coprinus comatus*, *Morchella esculenta*, *Gyromitra esculenta*, and the Lycoperdons.

DR. C. C. PARRY has in press a revision of the genus *Chorizanthe*, of which we have been permitted to see some advanced sheets. With this revision Dr. Parry intends to send out specimens, as can be seen from his advertisement. All the species but one have been examined by him, and most of them seen growing. With such facilities for study it is surprising that no more changes have to be made. Three species are reduced, *C. diffusa*, *C. cuspidata*, and *C. Wheeleri*; the monotypic genus *Lastarriaa* becomes *C. Lastarriaa*; and one new species is described, *C. Clevelandi*. We shall defer a more extended notice until the publication of the revision.

IN SCIENCE of Feb. 29, Joseph F. James gives an interesting account of the expulsion of water from a *Caladium* leaf. A new leaf being ready to expand by the side of an old one, the latter was cut off. Afterwards, from the stump end, jets of water began to be thrown to a height of an inch, and with a regular pulsation of about 180 per minute. This was kept up for two or three days, the rate gradually diminishing. It seems that other members of the Aroid family have been caught in the same performance, and in 1672 an account was published describing water expelled from the leaves of some aroids, resembling a fountain. These large stories are always the oldest.

MR. FRANK M. DAY has published, in the proceedings of the Am. Phil. Soc., Philadelphia, a paper on "The Microscopic Examination of Timber with regard to its strength," accompanied by four plates. It is a subject opened up recently by Dr. J. T. Rothrock, and developed by Mr. Day under his advice and with his assistance. It is well done, and comes from the Eli K. Price Botanical Laboratory of the University of Pennsylvania. We should have more such laboratories, and existing ones should be better equipped for exact and profitable work. The trouble is that boards of managers generally belong to the last generation and seem to be unable to conceive of the importance of such work.

IN A PAPER PRESENTED to the Royal Society of London, Prof. Alexander Dickson called especial attention to a series of remarkable glands which occur in the corrugated annulus which forms the rim of the pitcher of *Cephalotus*. If the inflexed rim of the pitcher be examined a number of openings may be found, alternating with the corrugations of the annulus. Each orifice is continued inwards as a canal-like fossa, at the bottom of which projects a nipple-shaped body. This body is the free apex of a gigantic gland, the bulk of which is imbedded in the parenchyma of the annulus. These glands may be truly denominated gigantic, as they range from .68^{mm} to 2.11^{mm} in length, according to the species. The function of these glands is probably the secretion of honey as a lure to insects.

PROF. WILLIAM BUCKHOUT, of Agricultural College, Pa., has been cultivating some of Mr. Lemmon's Arizona potatoes, and gives the first results in the *March Gardener's Monthly*. His first crop he pronounces to be simply diminutives of the cultivated potatoes. They changed color and quality so quickly when exposed to light that no fair test of their edibility could be made. As Prof. Buckhout says, it is absurd to expect any immediate results from the cultivation of this potato. If anything is going to be made of it, it must be by a long-continued series of carefully selected cultures. The queer thing is, though, that in the very same number is a letter from Prof. Lemmon, in which he gives the experience of E. S. Mumford, of Portlandville, N. Y., and his experience is that the tubers do not change color soon upon exposure to light, and that they are double the size of the one planted. As between the Pennsylvania and New York crops, the latter is the one to be further cultivated.

THE TIME has now come when botanists should be arranging to visit Philadelphia next summer. The delightful personal intercourse enjoyed last summer at Minneapolis makes those who were there very desirous of its repetition in

greater measure in Philadelphia. The Botanical Club that was organized with as little organization as possible will try to make it very profitable to botanists in the way of becoming acquainted with fellow-workers and examining under competent guidance the interesting plants of the vicinity. We venture to say that the ballast grounds will be well ransacked and many of its waifs added to our collections. Questions of postage are also to be discussed, and it is to be hoped that something definite can be arranged with the postal authorities. Many instances of mismanagement and injustice have already been reported to the committee, and we doubt not that some are yet to be heard from. With such definite complaints something can be accomplished.

PROF. T. CARUEL, of Florence, in 1881 presented to the Linnean Academy a treatise upon the classification of plants. It has now been re-edited by the author, in French, under the title, *Pensées sur la Taxonomie Botanique*, and published last year in Engler's *Botanische Jahrbücher*. So far as Phanerogams are concerned, Gymnosperms are given their proper position in relation to the higher Cryptogams, and Angiosperms begin with Monocotyledons. As every one now consents to this arrangement, the question naturally arises, When are we going to begin to use it? Prof. Caruel also discards our old divisions of *Polypetalæ*, *Gamopetalæ*, and *Apetalæ*, which every systematic botanist has long seen are too artificial to stand, and substitutes the cohorts *Dichlamydanthæ*, *Monochlamydanthæ*, and *Dimorphanthæ*. We would suggest that when the change has to come that shorter names be devised, for they must be used by many who could neither spell nor pronounce such names as the above. According to Dr. Gray, the first cohort includes Gamopetalous and Polypetalous orders generally; the second all the Candolleian orders from Ranunculaceæ to Fumariaceæ, the Cactaceæ, Portulacaceæ, etc.; the third has Begoniaceæ, Euphorbiaceæ, Urticaceæ, etc., and the Amentaceous orders. Some Jussieu or DeCandolle must arise and give us a new arrangement.

CURRENT LITERATURE.

Elementary Botany, with student's guide to the examination and description of plants. By George Macloskie, D.Sc., LL.D., Professor of Natural History in the J. C. Green School of Science, Princeton, N. J., etc. New York: Henry Holt & Co., 1883. pp. VIII, 373.

One who receives a new elementary botany now-a-days, turns to its examination in a somewhat skeptical frame of mind, hardly daring to hope that he will find in it any thing fresh or new, so often have former hopes been disappointed. But any one who begins to peruse this book will speedily become roused to the consciousness that here is really something far above the average run of text-books. It is doubtful, indeed, whether this one should be called a text-book, because the author tells us that he has aimed "to supply a readable sketch of botany, followed by a guide to work in the field and in the laboratory." It is not always that a book corresponds to the aim of an author, as stated in his preface. This, however, surely does, for it is one of the *most readable* books yet come into our hands. The style is admirably clear and vigorous, the pages unencumbered with technicalities (though technical terms are never